

REMARKS

Claims 1-18, 20, 42, 43, and 45 are pending. Claim 1 is currently amended. Claims 35, 36, 44, and 46 are currently canceled. Claims 37 and 38 are withdrawn from consideration.

Claim 1 is amended for clarity. Support for the amendment to claim 1 may be found, for example, in original claim 1 and in Figure 1. It is submitted that the clarification is inherent in originally filed claim 1 and is hence non-limiting.

Reconsideration of the application is requested.

Claim Objections

Claim 35 stands objected to because it is said to be dependent on a canceled claim. The Patent Office requires appropriate correction is required.

Claim 35 is canceled.

§ 103 Rejections

Claims 1-18, 20, 35, 36, 42, 43, 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mak et al. (USPN 5,490,415) in view of Bennett, Jr. et al. (USPN 4,511,534).

The Patent Office submits that Mak et al. teach a diffusion test apparatus that comprises:
a first base having a plurality of hollow projections extending outwardly from a first surface, each hollow projection having a tapered tip with an opening therein and a respective cavity contiguous with the opening disposed within the projection;

a second base having a first surface having a plurality of recessed tapered openings therein adapted to engage the plurality of hollow projections;

a membrane contacting the recess tapered openings and the tips of the hollow projections, the first base being fastened to the second base by fasteners.

Summarizing, the Patent Office further submits that Mak et al. teach various elements found in the dependent claims as discussed by the Patent Office in greater detail in the current Office Action dated 12/01/2006.

The Patent Office admits that Mak et al. do not teach a retaining plate for retaining the membrane to the second base.

The Patent Office submits that Bennett teaches a liquid transfer device that comprises a second base and a retaining plate (labeled as 42 in Bennett) that holds a membrane to the second base by removable fasteners. The Patent Office alleges that Bennett provides this configuration for quick and easy movement of liquid from one container to the next.

The Patent Office argues that it would have been obvious to one having an ordinary skill in the art at the time of the invention of modify Mak et al. to employ the retaining plate of Bennett to allow for moving the membrane and second base to another first base to measure diffusion across the membrane with a second liquid. The Patent Office further argues such a configuration would allow the membrane to stay intact with the second base while moving to a second testing liquid which would provide quicker testing of membrane diffusion on multiple sample liquids.

In response, Applicants submit that the liquid transfer device of Mak et al. is explicitly intended for single use. For example, Mak et al. state in col. 3, lines 30-50:

"A wide variety of diffusional systems have been developed for use with rate limiting membranes. Typically, the systems have cells arranged in either a side-by-side or vertical configuration and provide a means for agitating the cell chambers. For a review of conventional diffusion cell designs, see Friend, D. R., Journal of Controlled Release, 1992, 18, 235-248. With prior art permeation study testing procedures, the diffusion test is typically run for a period of 24 hours or more; over the course of the study, samples are periodically withdrawn from the receiver receptacle to evaluate the flux of drug through the skin over time. Conventional flowthrough diffusion cells are of this type. In contrast, the present invention is designed so that the permeation experiment is run to a pre-determined end point, such as six hours. Upon termination of the diffusion experiment, the receiver assembly is detached from the donor assembly. The receiver samples are then withdrawn from their respective wells, typically by aspiration, and assayed by

an appropriate analytical method. The length of the permeation experiment may be varied by the user." [underlining added]

Further teaching of single experiment usage may be found in Mak et al. in col. 5, lines 24-29. In view of the above, it is submitted that Mak et al. do not contemplate replacement of the receiver assembly during experimentation. To the contrary, it is further submitted that Mak et al. affirmatively teach that the device of is to be used with only one receiver assembly, thereby teaching away from combining the retaining plate of Bennett, Jr. et al. with the diffusion test apparatus of Mak et al. Accordingly, it is still further submitted that adding a retaining plate to the device of Mak et al. would have no purpose and would add unneeded complexity.

In addition, it is still further submitted that Mak et al. and Bennett, Jr. et al. are from different fields of endeavor. For example, Mak et al. concerns a diffusion test apparatus designed to study diffusion of material across a membrane while Bennett, Jr. et al. concerns a liquid transfer device (essentially an array of pipettes) wherein diffusion of material through the membrane would be at least undesirable.

Moreover, it is still further submitted that any alleged teaching by Bennett, Jr. et al. to provide such a configuration for quick and easy movement of liquid from one container to another does not relate to diffusion experiments, but merely to pipetting-type operations.

For at least these reasons, it is submitted that no teaching, motivation, or suggestion has been provided to combine Mak et al. with Bennett, Jr. et al., absent impermissible hindsight based on Applicants' own disclosure, and that the rejection of claim 1 has been overcome. The above arguments also apply to claim 42 by analogy.

Claims 35, 36, and 46 are canceled. Claims 2-18, 20, 43, and 45 each add additional features to patentable claims 1 or 42. Hence, claims 2-18, 20, 42, 43, and 45 are likewise patentable.

In summary, the rejection of claims 1-18, 20, 35, 36, 42, 43, 45 and 46 under 35 USC § 103(a) as being unpatentable over Mak et al. in view of Bennett, Jr. et al. has been overcome and should be withdrawn.

Claims 1-18, 20, 35, 36, 42, 43, 45, and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mak et al. (USPN 5,490,415) in view of Grass (USPN 5,591,636).

The Patent Office submits that Mak et al. teach a diffusion test apparatus that comprises:
a first base having a plurality of hollow projections extending outwardly from a first surface, each hollow projection having a tapered tip with an opening therein and a respective cavity contiguous with the opening disposed within the projection;

a second base having a first surface having a plurality of recessed tapered openings therein adapted to engage the plurality of hollow projections;

a membrane contacting the recess tapered openings and the tips of the hollow projections, the first base being fastened to the second base by fasteners.

Summarizing, the Patent Office further submits that Mak et al. teaches various elements found in the dependent claims as discussed by the Patent Office in greater detail in the current Office Action dated 12/01/2006.

The Patent Office admits that Mak et al. does not teach a retaining plate for retaining the membrane to the second base.

The Patent Office alleges that Grass teaches a membrane holder comprising an upper base (14), a retaining plate (18), and a lower base (16). The Patent Office further alleges that Grass teaches a membrane placed between the upper base and the retaining plate and held together by means of a threaded connection between the upper base and the retaining plate, and that the retaining plate can be attached to the base plate by bolts.

The Patent Office argues that it would have been obvious to one having an ordinary skill in the art at the time of Mak et al. to employ the retaining plate of Grass to allow for moving the membrane and upper base to another lower base to measure diffusion across the membrane with a second liquid. The Patent Office further argues such a configuration would allow the membrane to stay intact with the upper base while moving to a second testing liquid which would provide quicker testing of membrane diffusion on multiple sample liquids.

As discussed in response to the rejection over Mak et al. in view of Bennett, Jr. et al. above, Applicants submit that Mak et al. teach away from using a retaining plate.

Moreover, it is unclear how the retaining plate of Grass teaches, motivates, or properly suggests a configuration wherein perforations in the retaining plate are adapted to allow the hollow projections to pass therethrough (e.g., see Grass in Fig. 2).

For at least these reasons, it is submitted that no proper teaching, motivation, or suggestion has exists to combine Mak et al. with Grass, absent impermissible hindsight based on Applicants' own disclosure, and that the rejection of claim 1 has been overcome. The above arguments also apply to claim 42 by analogy.

Claims 35, 36, and 46 are canceled. Claims 2-18, 20, 42, 43, and 45 each add additional features to claim 1. Claim 1 is patentable for at least the reasons given above. Hence, claims 2-18, 20, 42, 43, and 45 must be likewise patentable.

In summary, the rejection of claims 1-18, 20, 35, 36, 42, 43, 45 and 46 under 35 USC § 103(a) as being unpatentable over Mak et al. in view of Grass has been overcome and should be withdrawn.

Rejoinder

In view of the patentability of claim 1 as discussed above, reconsideration and rejoinder and allowance of claims 37 and 38, which depend from claim 1, is respectfully requested.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Respectfully submitted,

Feb. 28, 2007
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